

REMARKS/ARGUMENTS

Claims 9 and 12-18 are pending in this application. By this Amendment, Applicant amends Claims 9 and 14, cancels Claims 10 and 11, and adds new Claims 17 and 18.

Claims 9-16 were rejected under 35 U.S.C. § 102(b) as being anticipated by Yamaguchi et al. (U.S. 6,577,511). Claims 10 and 11 have been canceled. Applicant respectfully traverses the rejections of Claims 9 and 12-16.

Claim 9 has been amended to recite:

A switching power supply device comprising:
a transformer including a primary winding, a secondary winding,
and a feedback winding;
a first switching element connected in series to the primary winding;
a control circuit provided between a control terminal of the first
switching element and the feedback winding;
a rectifier circuit connected to the secondary winding;
an output voltage control circuit arranged to detect an output
voltage output from the rectifier circuit and feed back the output voltage to
the control circuit through a single system; and
an impedance circuit; wherein
the control circuit includes **an on-period control circuit arranged
to turn off the first switching element in an on-state based on a
feedback signal transmitted from the output voltage control circuit
through the single system under non-light load**, and an off-period
control circuit arranged to control an off-period of the first switching
element by delaying turn-on of the first switching element based on the
feedback signal under light load;
the impedance circuit is arranged to connect the off-period control
circuit to the on-period control circuit, the impedance of the impedance
circuit changing based on the feedback signal, wherein control of the off-
period control circuit under light load and control of the on-period control
circuit under non-light load are sequentially performed in accordance with
a change in the impedance of the impedance circuit;
the on-period control circuit includes a second switching element
provided between the control terminal of the first switching element and
ground and a time constant circuit including a capacitor arranged to apply
a control voltage to the second switching element;
the off-period control circuit includes a third switching element

provided between the control terminal of the first switching element and the feedback winding and a fourth switching element provided between a control terminal of the third switching element and ground; and

the impedance circuit includes a first path arranged to feed a current generated by the feedback signal to the capacitor and a second path serving as a bypass to feed the current to ground.

(emphasis added)

With the unique combination and arrangement of features recited in Applicant's Claim 9, including the features of "an on-period control circuit arranged to turn off the first switching element in an on-state based on a feedback signal transmitted from the output voltage control circuit through the single system under non-light load" and "the impedance circuit includes a first path arranged to feed a current generated by the feedback signal to the capacitor and a second path serving as a bypass to feed the current to ground," Applicant has been able to provide a single system feedback circuit without using a method of detecting an increase in output voltage and provide a switching power supply device in which a variation of the output voltage is minimized, and an electronic apparatus including the same (see, for example, paragraph [0008] of Applicant's Substitute Specification).

The Examiner alleged that Yamaguchi et al. teaches all of the features recited in Applicant's Claim 9, including an on-period control circuit 5 arranged to turn off the first switching element in an on-state based on a feedback signal transmitted from the output voltage control circuit through the single system under non-light load. Applicant respectfully disagrees.

Although the off-period control circuit 6 of Yamaguchi et al. receives feedback signals from the output voltage control circuit 3, Yamaguchi et al. neither teaches nor suggests that the on-period control circuit 5 receives any feedback signals from the output voltage control circuit 3. In other words, Yamaguchi et al. fails to teach or suggest a switching power supply device in which **both** the on-period control circuit 5 **and** the off-period control circuit 6 receive feedback signals from the output voltage

control circuit 3. The Examiner has failed to specifically refer to any portion of Yamaguchi et al. to support the allegation that the on-period control circuit 5 of Yamaguchi et al. is arranged to turn off the first switching element **based on a feedback signal transmitted from the output voltage control circuit**, and in fact, the switching power supply device of Yamaguchi et al. is completely incapable of transmitting a feedback signal from the output voltage control circuit 3 to the on-period control circuit 5.

Thus, Yamaguchi et al. clearly fails to teach or suggest the feature of “an on-period control circuit arranged to turn off the first switching element in an on-state based on a feedback signal transmitted from the output voltage control circuit through the single system under non-light load” as recited in Applicant’s Claim 9.

To more clearly distinguish the present claimed invention over Yamaguchi et al., Applicant’s Claim 9 has been amended to recite the features that were recited in Applicant’s originally filed Claim 10 and 11.

The Examiner further alleged that Yamaguchi et al. teaches all of the features recited in Applicant’s Claims 10 and 11. Applicant respectfully disagrees.

Contrary to the Examiner’s allegations, since the on-period control circuit 5 Yamaguchi et al. does **not** receive a feedback signal from the output voltage control circuit 3, Yamaguchi et al. cannot possibly teach or suggest an impedance circuit which has a first path for feeding the current generated by the feedback signal from the output voltage control circuit 3 to a capacitor in the on-period control circuit and a second path serving as a bypass for feeding current to ground.

Thus, Yamaguchi et al. fails to teach or suggest the features of “the impedance circuit includes a first path arranged to feed a current generated by the feedback signal to the capacitor and a second path serving as a bypass to feed the current to ground” as recited in Applicant’s Claim 9.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 9 under 35 U.S.C. § 102(b) as being anticipated by Yamaguchi et

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al.

In view of the foregoing amendments and remarks, Applicant respectfully submits that Claim 9 is allowable. Claims 12-18 depend upon Claim 9, and are therefore allowable for at least the reasons that Claim 9 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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/Christopher A. Bennett #46,710/
Attorneys for Applicant

KEATING & BENNETT, LLP
8180 Greensboro Drive, Suite 850
Tyson's Corner, VA 22102
Telephone: (703) 637-1480
Facsimile: (703) 637-1499

Joseph R. Keating
Registration No. 37,368

Christopher A. Bennett
Registration No. 46,710